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RX8200 Advanced Modular Receiver

Software Version 4.3.2

USER GUIDE

EN/LZT 790 0009 R1A

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1 Introduction

1.1 Who Should Use this User Guide?

This User Guide is written for operators/users of the RX8200 Advanced Modular Receiver to assist in installation and operation. Detailed information can be found in the *Reference Guide* companion document which is issued on CD.

Warning!

Do not remove the covers of this equipment. Hazardous voltages are present within this equipment and may be exposed if the covers are removed. Only Ericsson trained and approved service engineers are permitted to service this equipment.

Caution!

Unauthorized maintenance or the use of non-approved replacements may affect the equipment specification and invalidate any warranties.

1.2 What Equipment is Covered by this User Guide?

Ericsson is introducing an improved ordering system for its television products. New part numbers are being introduced to support this new system. The table below shows the new part numbers used for ordering and supply of the product and its options.

Table 1 Equipment Model Descriptions

Marketing Code	Price Object Number	Supply Object Number	Description
RX8200/BAS	FAZ 101 0113/1	KDU 137 639/1	MPEG-2/MPEG-4 HD/SD Modular Receiver, AC Power Supply.
RX8200/BAS/2	FAZ 101 0113/2	KDU 137 639/2	MPEG-2/MPEG-4 4:2:2, AC Power Supply.

1.3 Hardware and Software Options

See *Table 2* and *Table 3* for a list of hardware and software options available with the receiver. Detailed information is in the *Reference Guide*.

Table 2 RX8200 Hardware Options

Marketing Code	Price Object Number	Supply Object Number	Description
RX8200/HWO/DVBS2	FAZ 101 0113/5	ROA 128 3757	DVB-S2 Input Card
RX8200/HWO/IP/GIGE	FAZ 101 0113/12	ROA 128 3761	Gigabyte 100/1000BaseT Ethernet
RX8200/HWO/G703	FAZ 101 0113/8	ROA 128 3763	G.703 ATM Input Card
RX8200/HWO/MP2/422	FAZ 101 0113/15	ROA 128 3765	MPEG-2 4:2:2 Decode Card with only SD Decode Enabled
RX8200/HWO/IP/OUT	FAZ 101 0113/14	ROA 128 3756	Dual Gigabit IP Transport Stream Output Card
RX8200/HWO/SD	FAZ 101 0113/18	ROA 128 3758	SD Video Input and ASI Output Card with 2x CVBS, 2x Connectors for ASI/SDI
RX8200/HWO/HD/3G	FAZ 101 0113/10	ROA 128 3768	HD and SD Video Input and ASI Output Card
RX8200/HWO/RS232	FAZ 101 0113/17	ROA 128 4207	Remote Data Card
RX8200/HWO/BSKYB	FAZ 101 0113/4	ROA 128 4203	NDS BSKYB CA Card
RX8200/HWO/BAL/AUD	FAZ 101 0113/3	ROA 128 3760	Balanced Analogue and Digital Audio Output Providing 2 Stereo Pairs of Audio
RX8200/HWO/DVBS2/2	FAZ 101 0113/6	ROA 128 3762	2nd Gen DVB-S & DVB-S2 Satellite Input Option
RX8200/HWO/HQDCONV	FAZ 101 0113/60	ROA 128 4419	High-Quality Down-Conversion
RX8XXX/CABLE/XLR	FAZ 101 0108/24	RPM 901 364	XLR Terminal Audio Break-out Cable
RX8XXX/CABLE/SCRTRM	FAZ 101 0108/23	RPM 901 365	Screw Terminal Audio Break-out Cable

Table 3 RX8200 Software Options

Marketing Code	Price Object Number	Supply Object Number	Description
RX8200/SWO/DVBS2/QPSK	FAZ 101 0113/32	FAT 102 0151	DVB-S2 QPSK License key
RX8200/SWO/DVBS2/8PSK	FAZ 101 0113/30	FAT 102 0152	DVB-S2 8PSK License key
RX8200/SWO/DVBS2/LSYM	FAZ 101 0113/31	FAT 102 0153	DVB-S2 Low Symbol Rate License Key
RX8200/SWO/MPEG2/SD	FAZ 101 0113/45	FAT 102 0169	MPEG-2 SD Decoding
RX8200/SWO/MPEG2/HD	FAZ 101 0113/44	FAT 102 0170	MPEG-2 HD & SD Decoding
RX8200/SWO/MP2/MP4/SD	FAZ 101 0113/40	FAT 102 0171	MPEG-2 & MPEG-4 SD Decode

Marketing Code	Price Object Number	Supply Object Number	Description
RX8200/SWO/MP2/MP4/SD/HD	FAZ 101 0113/41	FAT 102 0156	MPEG-2 & MPEG-4 HD and SD Decode
RX8200/SWO/SING/SERVFILT	FAZ 101 0113/53	FAT 102 0181	Single Service Filtering
RX8200/SWO/MULT/SERVFILT	FAZ 101 0113/47	FAT 102 0182	Multi-Service Filtering
RX8200/SWO/TTV	FAZ 101 0113/58	FAT 102 0168	Signal Protection Scrambling License
RX8200/SWO/IP/DATA	FAZ 101 0113/35	FAT 102 0183	High Speed Data Output
RX8200/SWO/PW	FAZ 101 0113/51	FAT 102 0154	Password Protection for Web Browser
RX8200/SWO/DIR5	FAZ 101 0113/27	FAT 102 0155	Director Single-Service CA
RX8200/SWO/DIR5/MSD	FAZ 101 0113/28	FAT 102 0166	Director Multi-Service Descrambling
RX8200/SWO/MSD	FAZ 101 0113/46	FAT 102 0165	Common Interface Multi Service Descrambling
RX8200/SWO/AC3	FAZ 101 0113/22	FAT 102 0158	Dolby Digital® Decoding / Down-mixing
RX8200/SWO/AAC	FAZ 101 0113/21	FAT 102 0179	AAC Decode
RX8200/SWO/NULL	FAZ 101 0113/48	FAT 102 0161	Null Packet TS License
RX8200/SWO/RAS	FAZ 101 0113/52	FAT 102 0164	RAS CA
RX8200/SWO/CI	FAZ 101 0113/25	FAT 102 0162	Common Interface CA Single-Service Decryption
RX8200/SWO/BISS	FAZ 101 0113/23	FAT 102 0163	BISS Mode 1 & E CA
RX8200/SWO/BISS/MSD	FAZ 101 0113/24	FAT 102 0167	BISS Multi-Service Descrambling
RX8200/SWO/IP/PROMPEG	FAZ 101 0113/37	FAT 102 0159	SMPTE 2022 Pro-MPEG FEC
RX8200/HWO/HD/3G	FAZ 101 0113/10	ROA 128 3769	HD OUTPUT CARD+1xCVBS, 1xRGB, 3x3G Connectors
RX8200/SWO/HDSDI/3G	FAZ 101 0113/34	FAT 102 0176	MPEG-4 HD 4:2:2 1080p 50/60 Decoding
RX8200/SWO/MP2/422/SD	FAZ 101 0113/59	FAT 102 0387	MPEG-2 SD 4:2:2 Decoding
RX8200/SWO/MP2/HD/422	FAZ 101 0113/39	FAT 102 0172	MPEG-2 HD and SD 4:2:2 Decode
RX8200/SWO/MP4/422/SD	FAZ 101 0113/43	FAT 102 0178	MPEG-4 SD 4:2:2 Decoding
RX8200/SWO/MP4/422/HD	FAZ 101 0113/42	FAT 102 0177	MPEG-4 HD 4:2:2 Decoding
RX8200/SWO/DCONV	FAZ 101 0113/26	FAT 102 0157	Simultaneous Down-conversion of HD to SD
RX8200/SWO/UPCONV	FAZ 101 0113/54	FAT 102 0174	Up-conversion from SD to HD (to

Marketing Code	Price Object Number	Supply Object Number	Description
			1080i or 720p)
RX8200/SWO/XCONV	FAZ 101 0113/55	FAT 102 0175	Cross-conversion
RX8200/SWO/FSYNC	FAZ 101 0113/33	FAT 102 0160	Frame Sync
RX8200/SWO/4AUD	FAZ 101 0113/20	FAT 102 0180	4 x Audio Capacity
RX8200/SWO/LDELAY	FAZ 101 0113/38	FAT 102 0173	Low Latency Decode

2 Installing the Equipment

2.1 Introduction

For best performance and reliability follow the instructions for site requirements and installation in the *Reference Guide* and only use installation accessories recommended by the manufacturers.

Warning!

Do not remove the covers of this equipment. Hazardous voltages are present within this equipment and may be exposed if the covers are removed. Only Ericsson trained and approved service engineers are permitted to service this equipment.

2.2 Operating Voltage

Caution!

This product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your business, consult a qualified electrical engineer or your local power company.

Note: Refer to the *Reference Guide* for details of the color codes used on the mains leads.

See *Table 5* for fuse information and also the *Reference Guide* for a full power supply specification.

AC Models

AC models are fitted with a wide-ranging power supply. It is suitable for supply voltages of 100-240 V AC -10% +6% at 50/60 Hz nominal.

2.3 Power Cable and Earthing

Check that the power cable is suitable for the country in which the Receiver is to be used.

Warning!

The Technical Earth is not a Protective earth for electric shock protection.

This unit must be correctly earthed through the molded plug supplied. If the local mains supply does not have an earth conductor do not connect the unit. Contact Customer Services for advice.

Before connecting the unit to the supply, check the supply requirements in *Annex B* of the *Reference Guide*.

2.4 Rear Panel Connectors

CD

Always use the specified cables supplied for signal integrity and compliance with EMC requirements (see *the Reference Guide*).

Note: Rear panel connectors may differ, depending on the options selected.

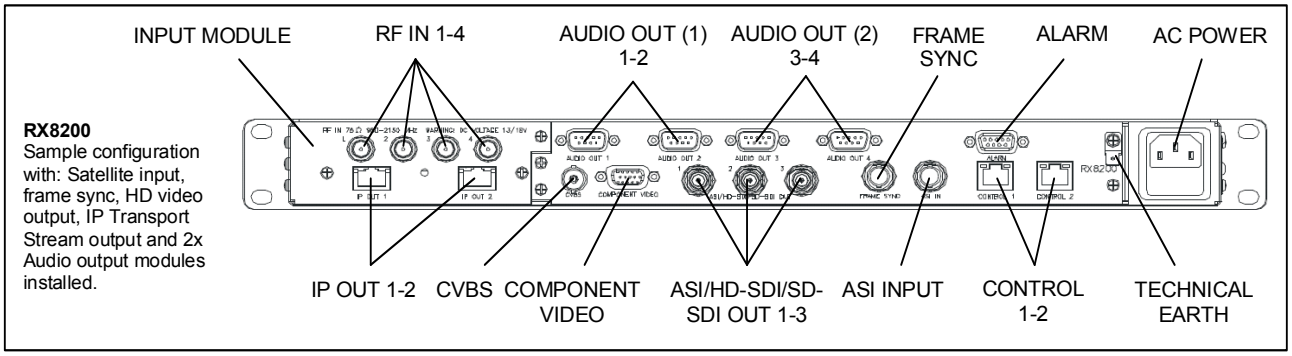


Figure 1 Rear Panel Connectors

Table 4 Types of Connector

Type of Connector	Description
RF IN 1,2,3 & 4	F-type connectors for DVB or DVB-S2 modulated input feed.
AUDIO OUT 1,2,3 & 4	9-way male D-type connectors for analogue and balanced digital audio output.
FRAME SYNC	75 Ω BNC connector for frame synching input.
ALARM	9-way male D-type connector for alarm signal output.
IP OUT 1 & 2	8-way RJ-45 connectors for 1000BaseT IP output feed & de-encapsulated IP data
CVBS	75 Ω BNC connector for SD composite video output.
COMPONENT VIDEO	9-way male D-type connectors for component video output.

Type of Connector	Description
ASI/SD-SDI/HD-SDI OUT 1 , 2 & 3	75 Ω BNC connector for ASI or SDI (user selectable) output feeds.
ASI INPUT	75 Ω BNC connector for ASI input feed.
CONTROL 1 & 2	8-way RJ-45 connectors for 10/100BaseT Ethernet control and monitoring.
AC POWER	IEC100-120 V AC / 220-240 V AC power input.
TECHNICAL EARTH	Spade connector for unit technical earth.

2.5 Connecting the Receiver to the Power Supply

Warning!

Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.

As no mains switch is fitted to this unit, ensure the local power supply is switched OFF before connecting the supply cord.

The receiver is not fitted with an on/off switch. Ensure that the socket-outlet is installed near the equipment so that it is easily accessible. Failure to isolate the equipment properly may cause a safety hazard.

Connect the receiver to the power supply as follows:

1. Ensure the power supply is isolated and switched off.
2. Ensure the correct fuse type and rating has been fitted to both the equipment and the power cable.
3. Connect the lead to the receiver input connector and then to the power supply.
4. Switch on the power supply.

Table 5 Fuse Type and Rating

Power Supply	Fuse Type and Rating
100-120 V AC / 220-240 V AC	IEC/EN 60127-2 Sheet 5 Bussmann S505/Littelfuse 215 2 A 250 V T HBC

Note: Refer to the *Reference Guide* for all power supply, fuse replacement, safety, EMC information and operating conditions.

3 Quick Start Guide: Connect-Power-Configure

3.1 Connecting the Receiver

The following points should be noted when making signal connections to the receiver:

- For models with option RX8200/HWO/DVBS2 fitted, connect the incoming satellite RF feed to the rear panel connector marked **RF IN 1 - 4**.
- For models with option RX8200/HWO/IP/GIGE fitted, connect the incoming MPEG Transport Stream over IP inputs to the rear panel connectors **IP IN 1 -2**.
- For models with option RX8200/HWO/G703 fitted, connect the incoming E3 or DS-3 ATM inputs to the rear panel connector **G703**.
- If you have an incoming ASI feed, this should be connected to the **ASI Input**.
- Decoded PAL or NTSC video is output on connector **CVBS**.
- Decoded analogue or digital audio is output on connectors **AUDIO OUT 1, 2, 3 or 4**. Adaptor cables are used to provide the connector type required for the installation.
- **ASI OUT 1, 2** or **3** may output a Transport Stream, this can be manipulated/ generated in many ways according to the customer's requirements. Connectors may also be configured as SDI/HDSDI.
- For models with option RX8200/HWO/IP/OUT fitted, the incoming feed is also routed through the unit and output on connectors **IP OUT 1** and **IP OUT 2**.
- If the unit is to be controlled by Web browser or PC based control system then the control PC should be connected to connector **CONTROL 1** or **CONTROL 2**.
- If the unit is to be used to decrypt (non-Director) encrypted feeds then a Conditional Access Module and card should be inserted in the slot labeled **Conditional Access Interface** in the front panel.

3.2 Powering the Receiver

3.2.1 Switching On

Caution!

This equipment should not be operated unless the cooling fans are working and there is free-air flow around the unit.

1. Connect all signal and power cables to the rear panel of the unit.

2. Switch on the AC power supply to the unit at the wall or rack outlet.

Note: The RX8200 Receiver does NOT contain a power on/off switch.

3. After a short period of initialization the following screen is displayed on the Front Panel:

4. During initialization, confirm that the **Status** LED is on and all **Up**, **Down**, **Left**, **Right**, **Edit** and **Save** pushbuttons are lit.

3.2.2 Power Up Operating Modes

When the equipment is switched on it will assume the control mode that was set when the power was turned off. This could be either:

- Local Front Panel/Web Browser control
- Director NCP control.

3.3 Configuring the Inputs

3.3.1 Transport Stream (ASI) Input

To configure the unit for ASI input:

1. Select **ASI** input from sub-menu **Select Input.**

3.3.2 Satellite (DVB-S or DVB-S2) Input (if fitted)

Ensure that the incoming feed is connected to connector **RF IN 1**.

To configure the unit for Satellite input, navigate to the front panel **Input** menu **Source # Configure** menu and carry out the following steps:

1. Select **SAT** input
2. Set the LNB frequency
3. Set the Satellite frequency
4. Set the Symbol Rate
5. Set the Modulation scheme and FEC
6. Set the Roll-Off
7. Set the set the LNB power output

8. Set the set the LNB power output level

A description of each of these User Settings can be found in the *Reference Guide*.

Note: If the unit has successfully locked to the incoming feed, then the TS Lock value in menu **Input** should be **LOCKED**.

3.3.3 IP (GIGE) Input (if fitted)

Ensure that the incoming feed is connected to connector **IP IN 1**.

To configure the unit for IP GIGE input, navigate to the front panel **Input** menu and carry out the following steps:

1. Select **IP** input
2. Set the Network 1 (and Network 2, if used) IP Address
3. Set up the MAC Mode parameters
4. Set up I/P Ports settings
5. Set up Stream 1/Unicast 1 (and Stream 2/Unicast 2, if used) settings
6. Set up Alarms/Alerts settings as required.

A description of each of these User Settings can be found in the *Reference Guide*.

Note: If the unit has successfully locked to the incoming feed, then the TS Lock value in menu **Input** should be **LOCKED**.

3.3.4 G.703 (ATM) Input (if fitted)

Ensure that the incoming feed is connected to connector **G703**.

To configure the unit for G.703 ATM input, navigate to the front panel **Input** menu and carry out the following steps:

1. Select **G703** input
2. Set the Mode
3. Set up Destuffing/Deinterleaver
4. Set up Reed Solomon/Derandomiser
5. Set up Man Packet Length Ctrl/Packet Length Size
6. Set up ATM Delta/ATM Alpha settings
7. ATM Descrambling/Header Correction
8. ATM Header Error Ignore ATM VPI

9. Set up Sync Count to Lock/Sync Miss Sample Size
10. Set up Sync Miss Limit.

CD A description of each of these User Settings can be found in the *Reference Guide*.

Note: If the unit has successfully locked to the incoming feed, then the TS Lock value in menu **Input** should be **LOCKED**.

3.4 Selecting a Decode Service (Program)

To select a decode service:

1. Navigate to the **Service** menu. For incoming feeds containing only a single service the service may be selected automatically depending on service selection control.
2. If the service is NOT selected, press **Edit** and, using the ▲ (Up) and ▼ (Down) pushbuttons in the decode service sub-menu, scroll through the service name list.
3. Press **Save** to select the required service.

Note: If the unit has successfully selected a service, then the Service ID and Service name should be displayed in the **Service** menu.

3.5 Configuring the Video Output

When configuring the Video Output, the following points should be observed:

- The unit will automatically decode the first video component that it finds within the selected service.
- An alternative video component may be selected from the service tab on the Web Control interface.
- If the incoming video is successfully decoded then the status **OK** should be displayed on the appropriate page.
- Successfully decoded High Definition video will be output from the connector marked **Video Component**.
- Successfully decoded Standard Definition video will be output from the connector marked **CVBS**.

3.6 Configuring the Audio Outputs

When configuring the Audio Outputs the following points should be observed:

- The unit will automatically decode the first two audio components that it finds within the selected service.
- Alternative audio components may be selected from the service tab on the Web Control interface.

3.7 Configuring for Single-service Decryption

When configuring for Single-service Decryption the following points should be observed:

- If the service selected for video decode contains encrypted components these components will automatically be decrypted by the unit.
- The outgoing feed from the unit will contain these decrypted components providing the TS feed on the **Output** tab on the Web Control interface is set to **descrambled**.

3.8 Configuring for Multi-service Decryption

When configuring for Multi-service Decryption the following points should be observed:

- With Director Multi-service Decryption, when a feed containing more than one encrypted service is applied to the unit, the first 24 services detected are automatically decrypted. A list of these services can be found in the service table on **Services** Menu.
- With Common Interface Multi-service Decryption, when a feed with more than one encrypted service is applied to the unit, the user may choose how it is decrypted using the **Maximum CAM Services**, **Maximum CAM Components** and **Maximum CAM Components Per Service** dialog boxes. The user should refer to the CAM vendor for CAM compatibilities before setting this up.
- This list may be modified from the **CA** tab on the Web Control interface.

Note: This is only applicable for units/models that have Multi-service Decryption licenses enabled.

4 Front Panel Control

4.1 Introduction

The Front Panel display and keypad may be used to configure, control and monitor the receiver when an external control system is not used.

Note: A list of receiver user settings that may be viewed or changed via the front panel and those that may be viewed or changed via the external web browser interface can be found in the *Reference Guide*.

4.2 Receiver Front Panel

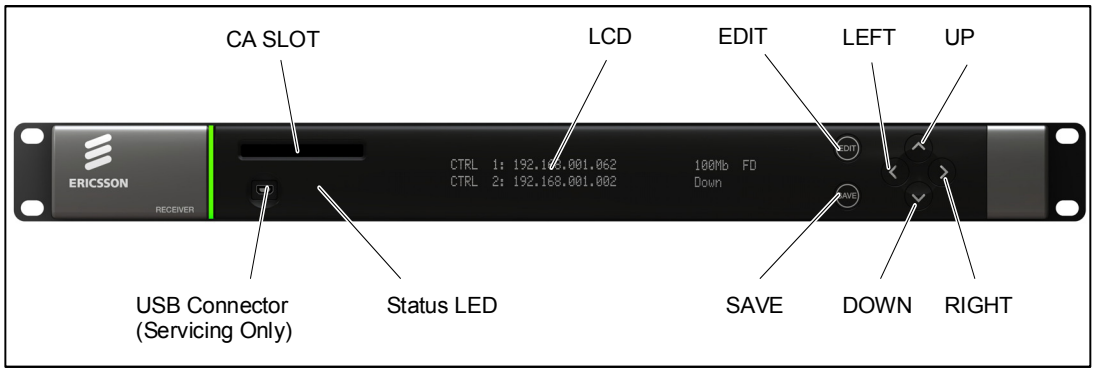


Figure 2 Front Panel LEDs and Pushbuttons

4.3 Using the Front Panel Controls

4.3.1 Status LED

This multi-colored LED provides a visual indication of the summary status of the unit. The LED can be any one of three colors:

- **Red (CRITICAL Error)**. Indicates that the unit has lost lock with the Transport Stream.
- **Amber (MAJOR or MINOR Error).** Indicates that the unit is locked to a Transport Stream but an error has been detected signifying incorrect conditions or system functioning.
- **Green (NO Errors).** Indicates that the unit is locked to a Transport Stream and correct conditions and system functioning are detected.

4.3.2 LCD

A 2-line x 40-character back-lit dot-matrix Liquid Crystal Display (LCD) displays various menus and settings. The menus and setting available will vary depending on which options have been enabled through the purchase of a suitable license.

4.3.3 Arrow Pushbuttons

Four arrow pushbuttons (or keys) are used to navigate through the front panel LCD menus.

Each arrow pushbutton is backlit by an integral LED when active, indicating that a further choice or action is available by pressing that pushbutton.

▲ = Up

▼ = Down

◀ = Left (Back)

▶ = Right (Forward)

4.3.4 Edit and Save Pushbuttons

The **Edit** and **Save** pushbuttons are used to modify and store user settings within the selected menu.

The **Edit** pushbutton is backlit by an integral LED when the current menu contains an editable setting.

To edit a user setting within the selected menu:

1. Press the **Edit** pushbutton and then use the ◀ (Back) and ▶ (Forward) pushbuttons to move the cursor within that menu (if necessary).
2. Change the value of the setting using the ▲ (Up) and ▼ (Down) pushbuttons.

During this edit operation, both the **Edit** and **Save** pushbuttons will be lit.

The **Save** pushbutton is backlit by an integral LED when changes have been made to a setting that require saving.

When a user setting has been modified:

1. Press the **Save** pushbutton to confirm and action this new setting.
2. To ignore any changes that have been made and to return to the original setting, press the **Edit** pushbutton.

4.4 Front Panel Menus

An overview of the available Front Panel menus is shown below. The menus and settings available will vary depending on which receiver model is being used and which options have been enabled through the purchase of a suitable license.

Note: The menu structure is subject to change as further functionality is added.

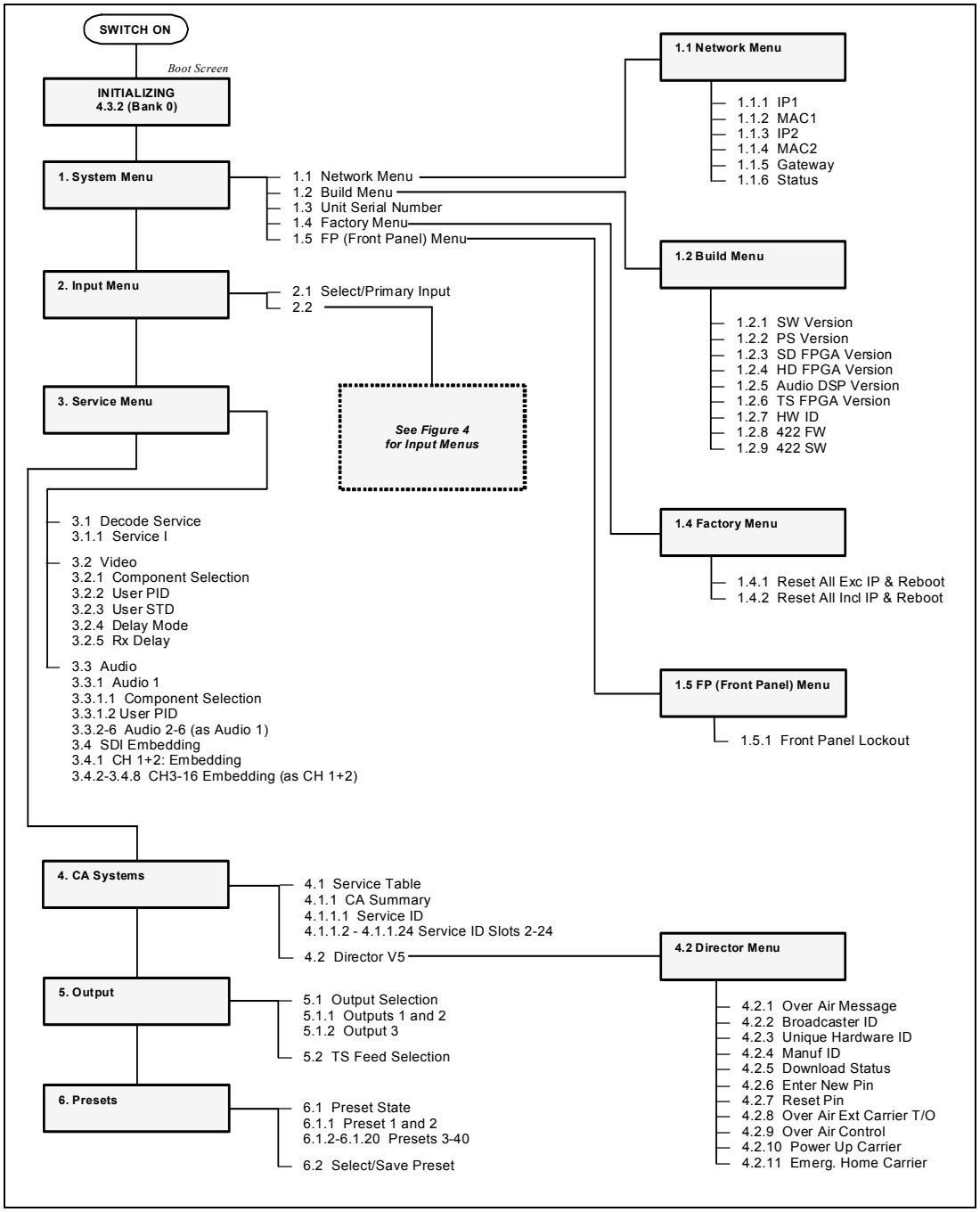


Figure 3 Front Panel Menus

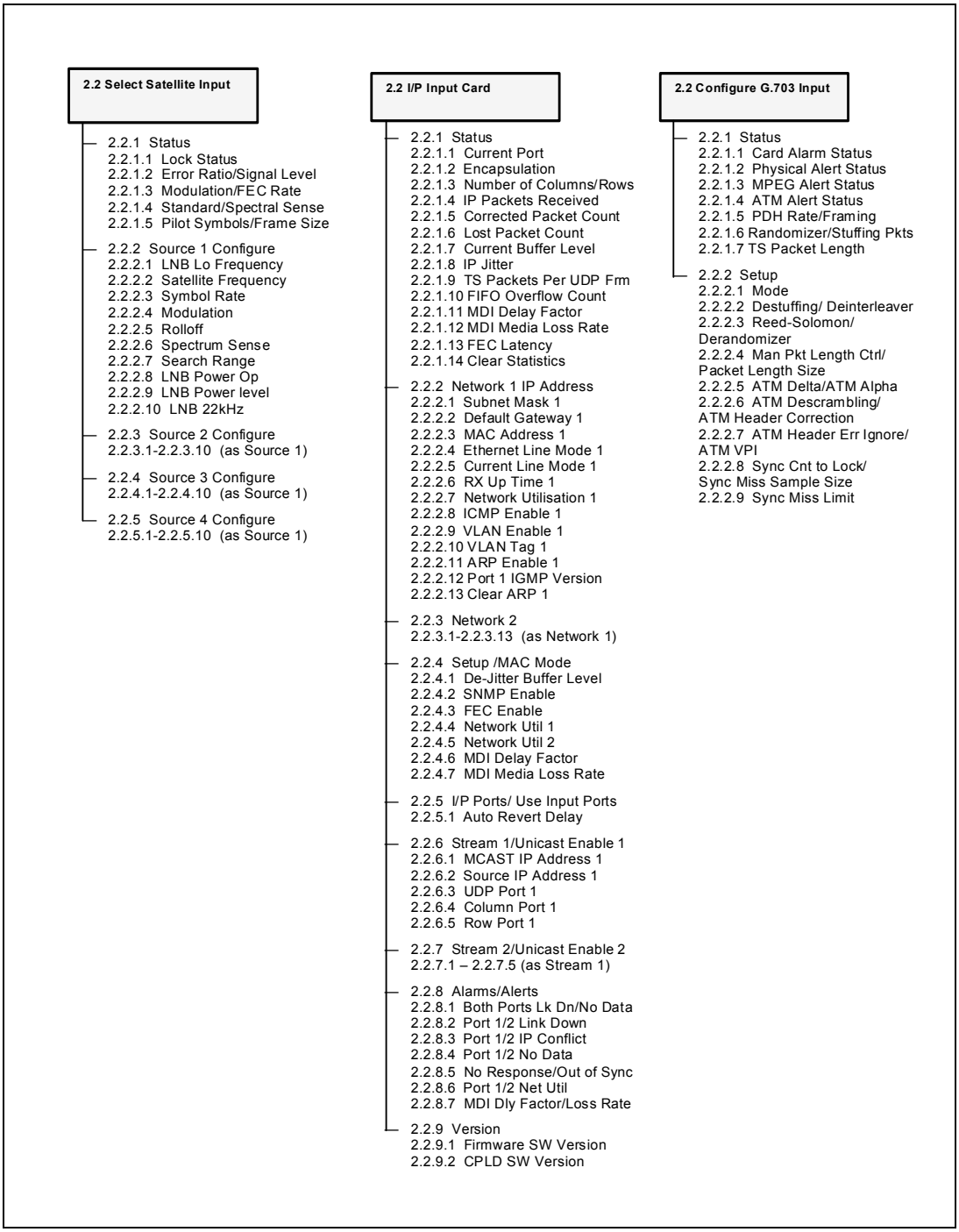


Figure 4 Input Card Front Panel Menus

4.4.1 Menu Structure

The Front Panel menus and sub-menus, available on the LCD, provide the configuration parameters that may be viewed, selected and/or modified.

- **System** - Provides sub-menus for viewing/configuring the receiver hardware and access parameters.
  - **Network** – Enables the input and display of the addresses required to communicate with the receiver. Access to the receiver Status page is also available from this sub-menu.
  - **Build** - Provides version and ID numbers for the hardware and software products installed in the receiver. Also provides options for rebooting the receiver and deactivating the Front Panel controls.
  - **Unit Serial Number** - Displays the unit serial number.
  - **Factor** - Provides receiver rebooting options.
  - **FP (Front Panel)** – Enables viewing/configuring of the Front Panel lockout facility, which allows the Front Panel controls to be deactivated.
- **Input** - Provides sub-menus for viewing/configuring the Input Card (Satellite Input Card, I/P Input Card or G.703 Input Card) parameters.
  - **Select/Primary Input** - Enables the selection of the primary input for the receiver.
  - **Select Satellite Input** – Enables viewing and editing of the configuration parameters for the Satellite Input Card, if fitted.
  - **IP Input Card** - Enables viewing and editing of the configuration parameters for the I/P Input Card, if fitted.
  - **Configure G.703 Input** - Enables viewing and editing of the configuration parameters for the G.703 Card, if fitted.
- **Service** – Provides sub-menus for viewing/configuring the currently selected service for decode from the input feed.
  - **Decode Service** - Enables selection of the required decode service.
  - **Video** – Enables selection of video services, such as the video component, etc.
  - **Audio** - Enables selection of audio services, such as the channel, etc.
- **CA Systems** – Provides sub-menus for viewing/configuring Conditional Access parameters that restrict and control access to the receiver and select the service for decryption from the incoming feed.
  - **Service Table** – Displays a summary of the CA features and the service ID number.

  - **Director** – Enables configuration of Director Conditional Access parameters, such as: ID numbers, download status and the facility to reset or change the PIN number.

- **Output Menu** - Provides sub-menus for viewing/configuring the receiver output parameters.
  - **Output Selection** - Enables selection of the required output type.
  - **TS Feed Selection** - Enables selection of the descrambling for the Transport Stream Feed.
- **Presets** - Provides sub-menus for viewing, storing and retrieving up to 40 sets of input configuration parameters (tuning parameters and service selections).
  - **Preset State** - Enables the current list of presets to be viewed.
  - **Select/Save Preset** - Enables selection and saving of presets.

More detail on all user settings may be found in the *Reference Guide*.

5 Web Browser Control

5.1 Introduction

A personal computer (PC) running a Web Browser can be used to configure, control and monitor the receiver remotely. The following web browsers have been tested:

- Microsoft Internet Explorer (This is the only browser supported by Ericsson)
- Mozilla Firefox (Functional but unsupported)
- Google Chrome (Functional but unsupported)

5.1.1 Setting Up Web Browser Remote Control

1. Connect the PC to either of the two IP control interfaces on the rear of the receiver (labelled **ETHERNET 1 / 2** or **CONTROL 1 / 2**).
2. Enter the settings for the relevant control port (IP Address, Subnet and Gateway) via the front panel **Network** menu.

Note: If the receiver is connected to an existing network, or is not on the same subnet as the control PC, assistance from the network administrator may be required in modifying the network settings.

3. Open a Web Browser window on the PC.
4. Enter the IP address of the receiver into the address field of the Web Browser. The Status page of the receiver interface will appear in the Web Browser window.

Note: To assist with troubleshooting, the IP control ports will respond to ICMP PING request messages.

More details on all receiver user settings available on Web Browser Control can be found in the *Reference Guide*.

5.2 Using the Web Browser Interface

5.2.1 Navigation

The Web Browser Interface displays various web pages, corresponding to the different functions of the receiver, in the format shown in *Figure 5*.

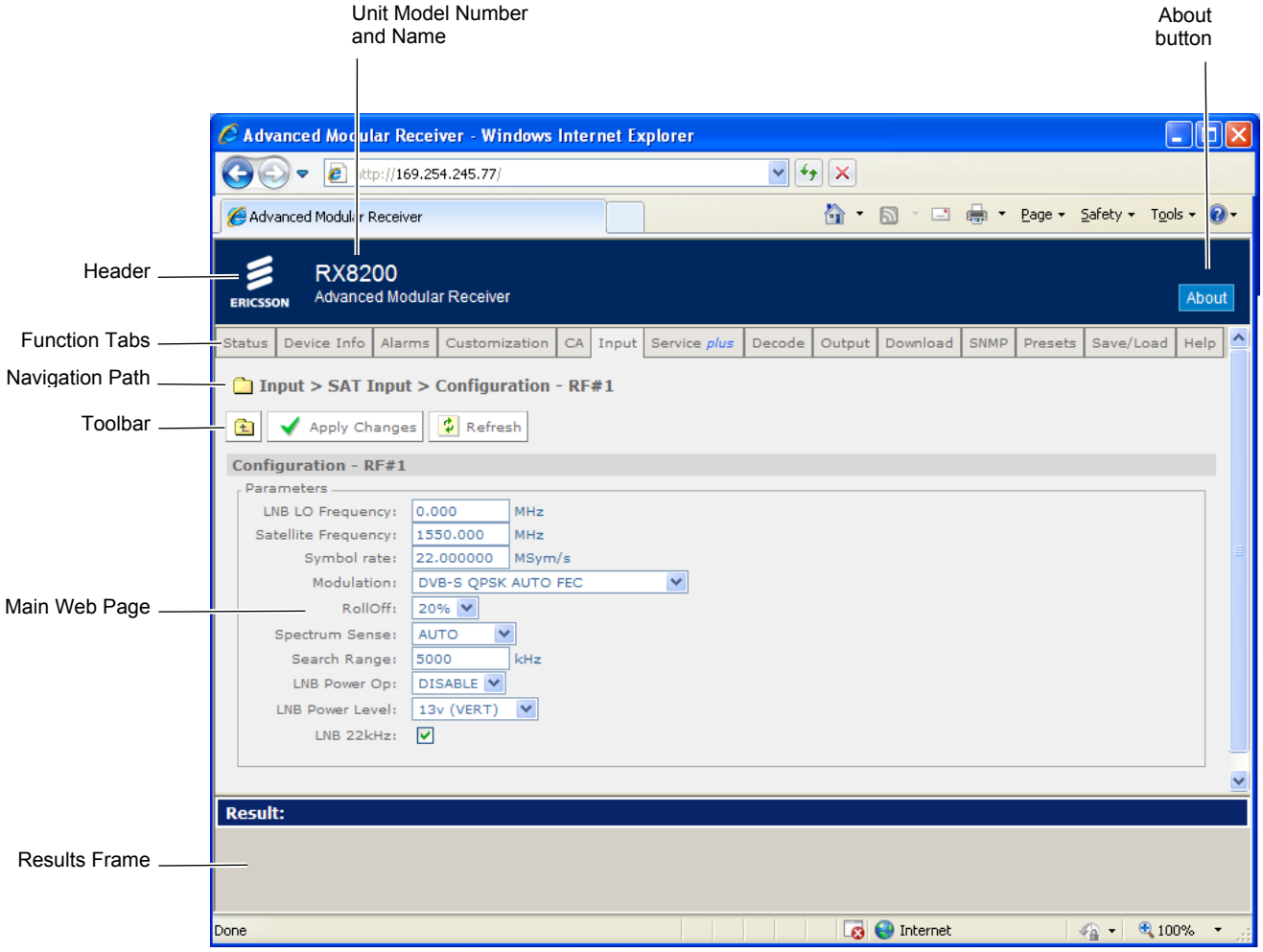


Figure 5 Web Page Overview (Typical)

- **Header** – The header of the web page displays the Ericsson logo and the unit model number name. At the right-hand side of the header an **About** button which, when clicked, displays an information dialog about the unit, including the software version number. Click the **OK** button to close the dialog.

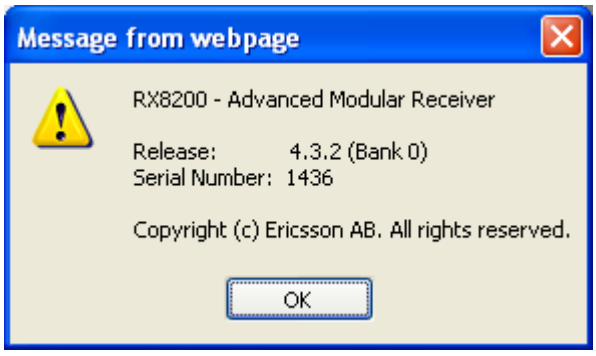


Figure 6 About dialog (Typical)

- **Function Tabs** – The web pages for control and monitoring of specific functions are accessed by selecting the appropriate function tab along the top of each

web page. When you switch between tabs, the browser remembers the path for each tab.

- **Navigation Path** – The web pages are organized into a tree-like structure, like the directory on a computer. The current complete navigation path is always displayed at the top of the web page, which shows the route taken to the currently displayed web page. To return to a higher level (parent) web page (folder), simply click on the relevant name link in the Navigation Path or click or the Top Level Folder in the toolbar.
- **Toolbar** – The toolbar provides various tools/buttons, depending on the web page selected. Various icons, buttons and symbols can appear in the Toolbar, depending on the web page displayed.
- **Main Web Page** – The main content of the web page (or folder) displays the parameters and their current values. Some parameters will be modifiable by overtyping, by selecting an option from a drop-down menu or by placing a tick in a checkbox, as required. Any changes made will not be applied to the unit until the **Apply Changes** button is clicked in the Toolbar.
- **Results Frame** – The result frame at the bottom of the screen shows the results of command actions. **SUCCESS**, **SUCCESS with warnings** or **ERROR** may be displayed, with further details as appropriate for more complex actions.

The following table lists the various icons, buttons and other symbols used in these web pages.

5.2.2 Viewing the Web Pages

The user settings that may be viewed, or modified from the Web Browser interface, are grouped together by function and are displayed on a number of pages. These pages can be viewed by selecting the relevant tabs.

After any changes are made to user settings, the '**Apply Changes**' button must be pressed to action the changes.

To use the receiver Web Browser Interface: enter the IP address (which was assigned to the receiver control port in the front panel system menu) into the address field of the Web browser.

If the network is correctly configured, the Status page should be automatically loaded and displayed.

5.3 Web Pages

5.3.1 Status

This web page shows a number of top-level parameters indicating the current status of the receiver.

Figure 7 Status Web Page

5.3.2 Device Info

The Device Info web page provides access to system-level settings for the receiver and can be used to enable the Front Panel Lockout Facility and initiate Rebooting functions.

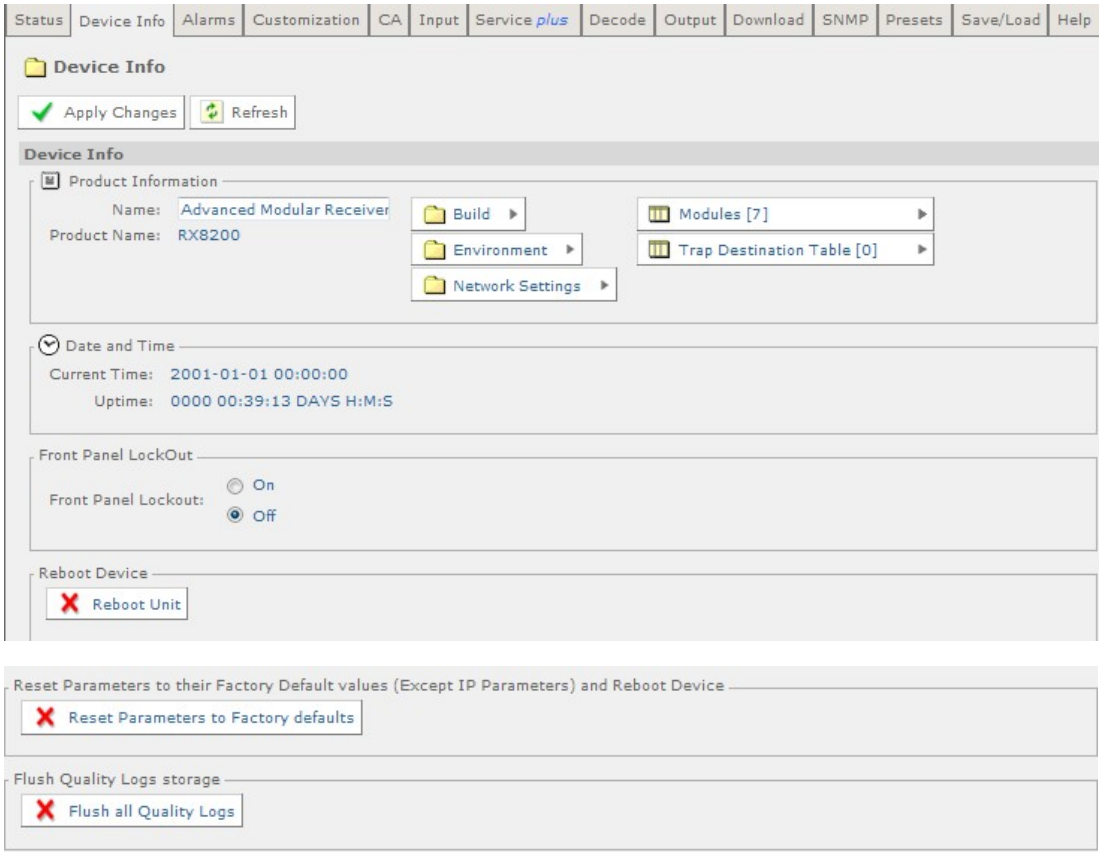


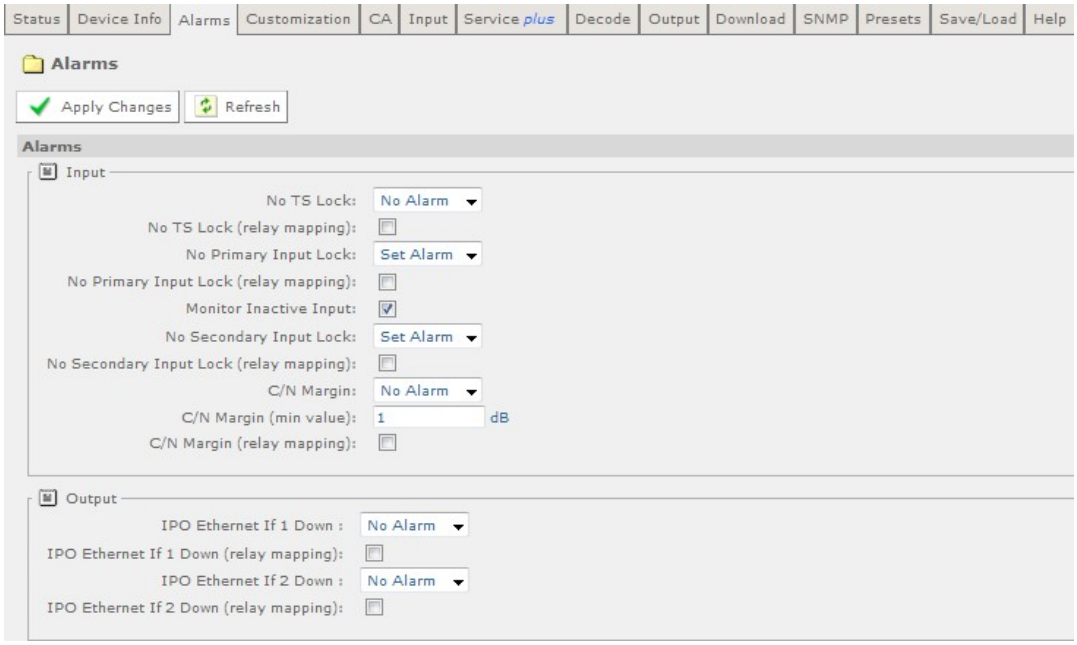
Figure 8 Device Info Web Page

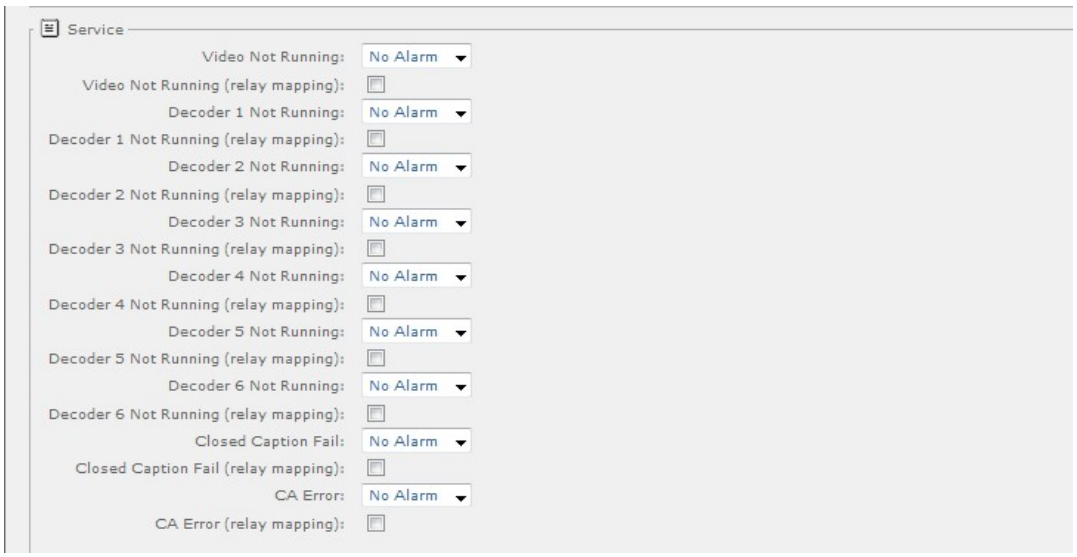
This page also provides buttons to the following further web pages:

- **Build** – provides details of equipment build and version numbers. No user-editable fields.
- **Environment** – provides details of the physical environment of the equipment such as temperature and fan speed. No user-editable fields.
- **Network Settings** – provides details of settings for control 1 and 2 networks. No user-editable fields.
- **Modules** – lists all modules contained in the equipment chassis. No user-editable fields.
- **Trap Destination Table** – lists the destination of SNMP Trap messages that are generated when an alarm occurs. This page provides a facility for the user to add further trap destination details as required.

5.3.3 Alarms

The Alarms web page provides access to the alarms settings for the receiver. The contents of this page are composed mainly of fields with drop-down menus which allow the setting or masking of various alarms and check boxes which can be used to activate relay mapping. Two of the alarm fields, namely C/N (Carrier-to-Noise) Margin and Over Temperature also have associated entry fields which allow the user to enter a value which, if exceeded, will activate the alarm.





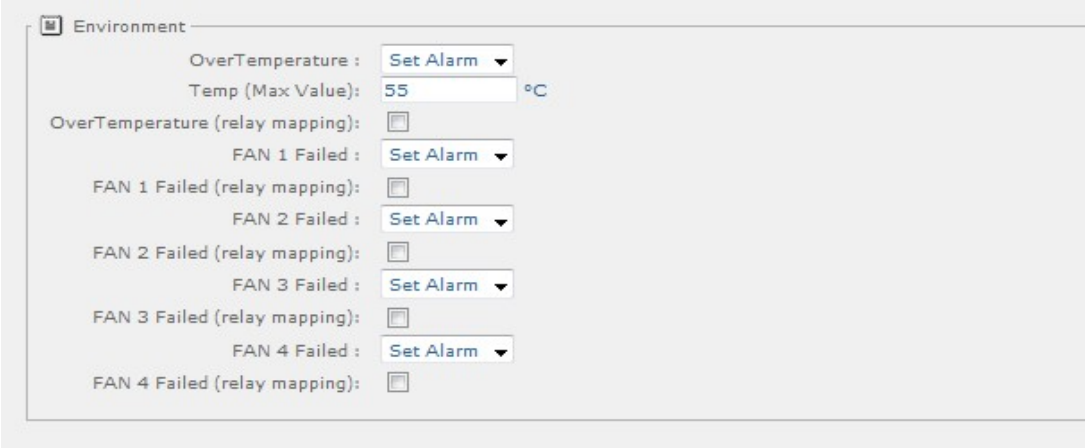


Figure 9 Alarms Web Page

5.3.4 Customization Web Page

The Customization web page provides access to the list of licenses enabled on the equipment and to enable further licenses (as purchased) by entering the custom key provided.

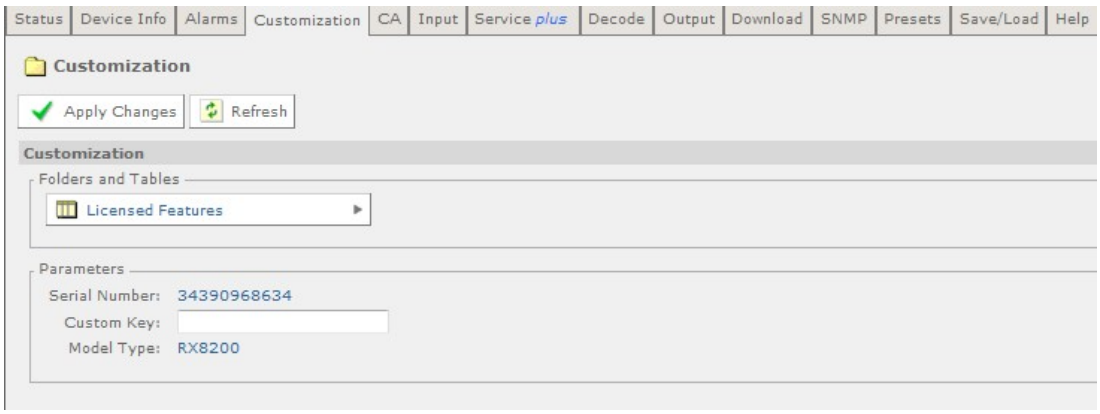


Figure 10 Customization Web Page

5.3.5 CA

The CA web page allows viewing and modification of the Conditional Access (CA) user settings for:

- **Director** - allows the user to view the current settings for the Director and to activate or deactivate various functions as required.
- **BISS** - allows the user to view and modify the settings for Basic Interoperable Scrambling System (BISS). These are Mode 1, Mode E Fixed, Mode E Ericsson, Mode E User One, Mode E User Two. Mode 1 uses an unencrypted key for the BISS key. Mode E uses an encrypted key, which uses either an internal code word or User One or User Two to decrypt, depending on the mode.
- **Signal Protection** - allows the user to enable or disable signal protection.

- **RAS** - allows the user to select Digital Satellite News Gathering (DSNG) or Fixed Key mode and input a 7-digit DSNG key.

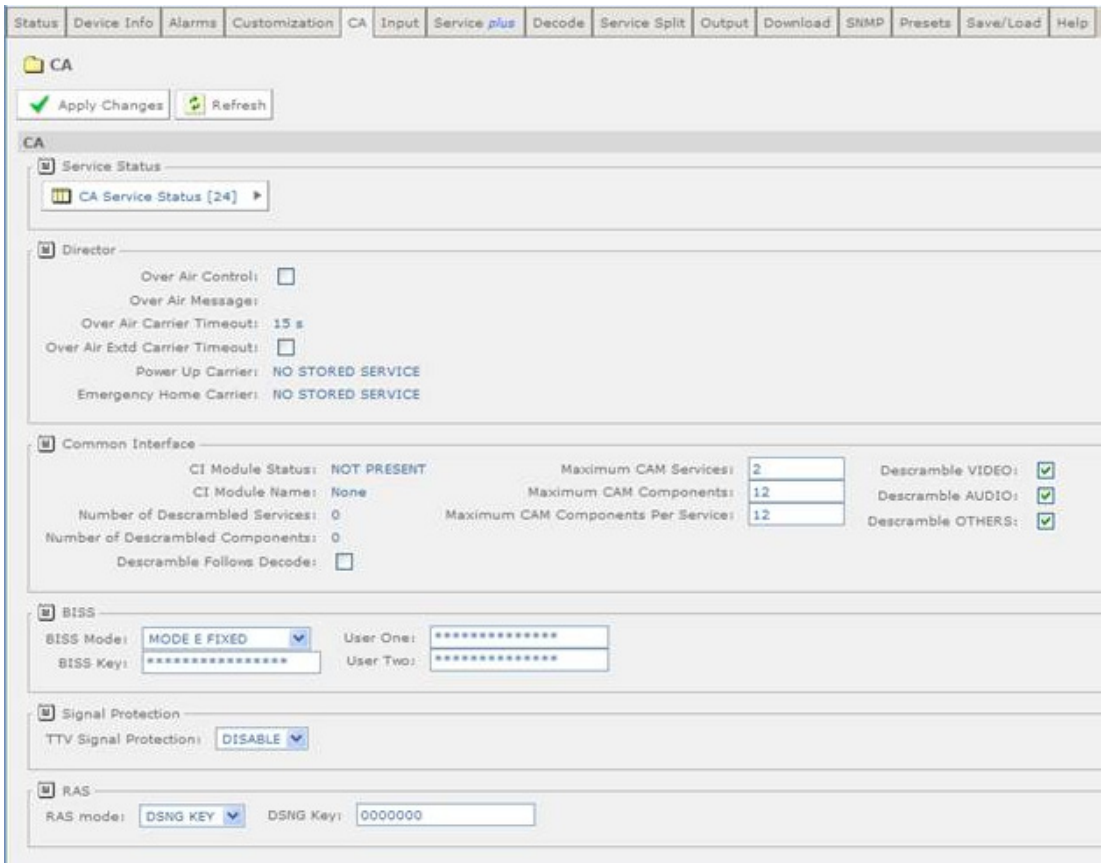


Figure 11 CA Web Page

5.3.6 Input

The Input Web Page provides access to the parameters of the various inputs to the receiver. The page, which is displayed, depends on which Input cards are fitted. The options are:

- Satellite Input Card
- I/P Input Card
- G.703 Input Card

Typically the pages include parameters for input feed lock status and bit rate, primary and secondary feed selection, input tuning, input signal and quality levels.

If the Satellite Input Card is fitted, the following Input web page is displayed.

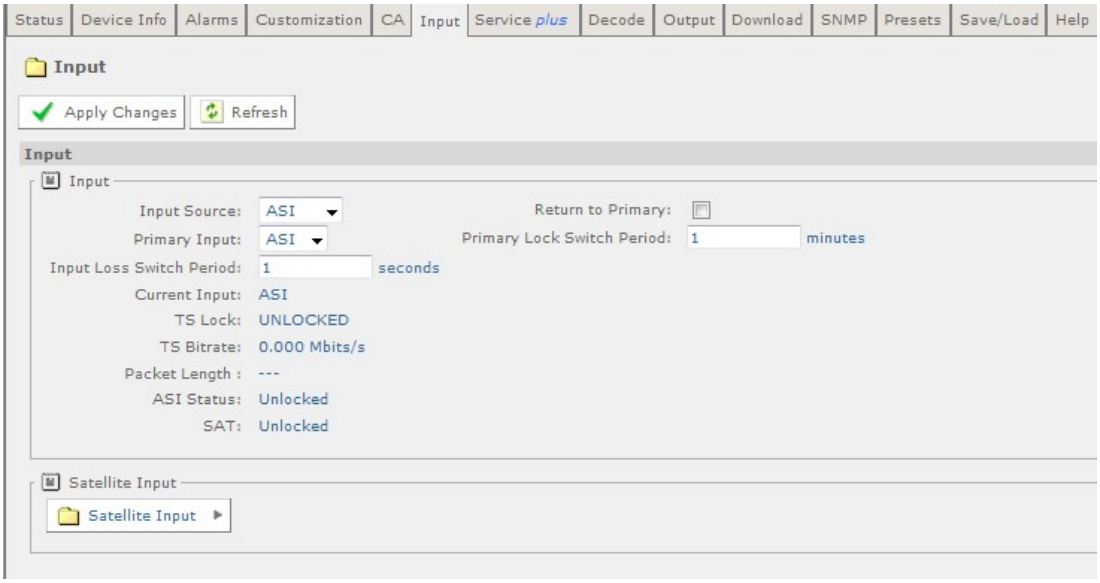


Figure 12 Input Web Page (Satellite Input Card fitted)

Click on the **Satellite Input** button on the Input page to display a further sub page.

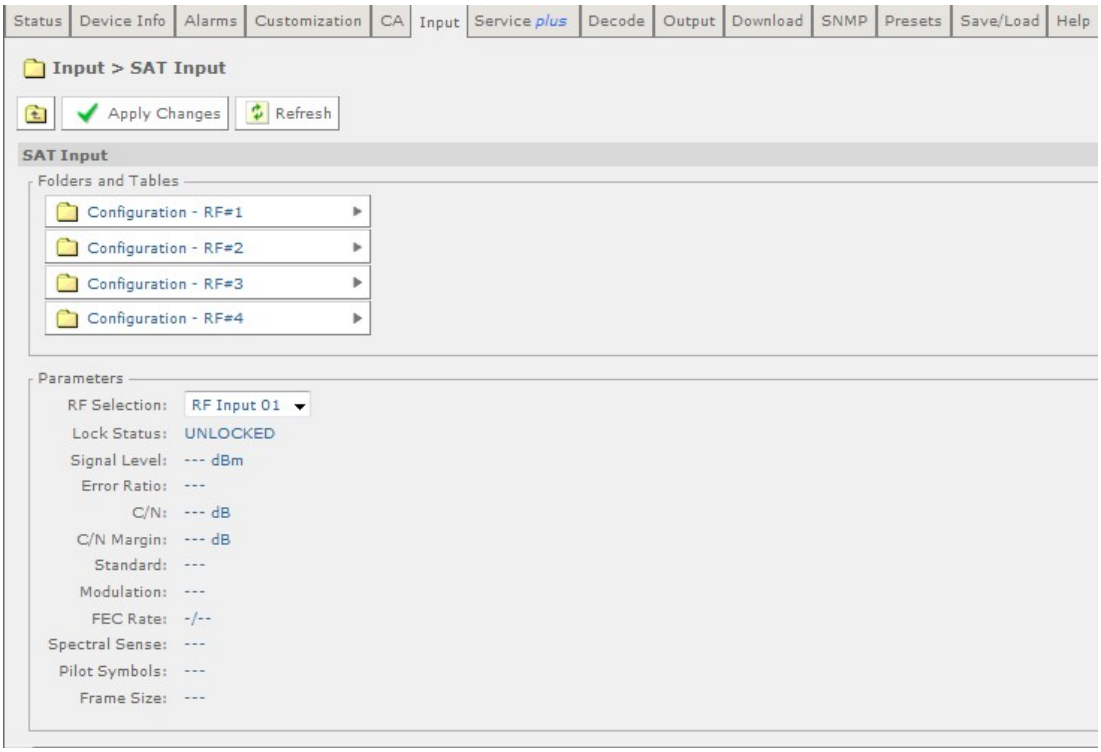


Figure 13 Input > SAT Input Sub Page (Satellite Input Card fitted)

The only field which may be edited by the user is the **RF Selection** field which allows selection of the appropriate RF Input.

There are also four **Configuration** buttons which allow the viewing and setting of the tuning parameters for the four possible RF inputs.

If the I/P Input Card is fitted, the following web page is displayed.

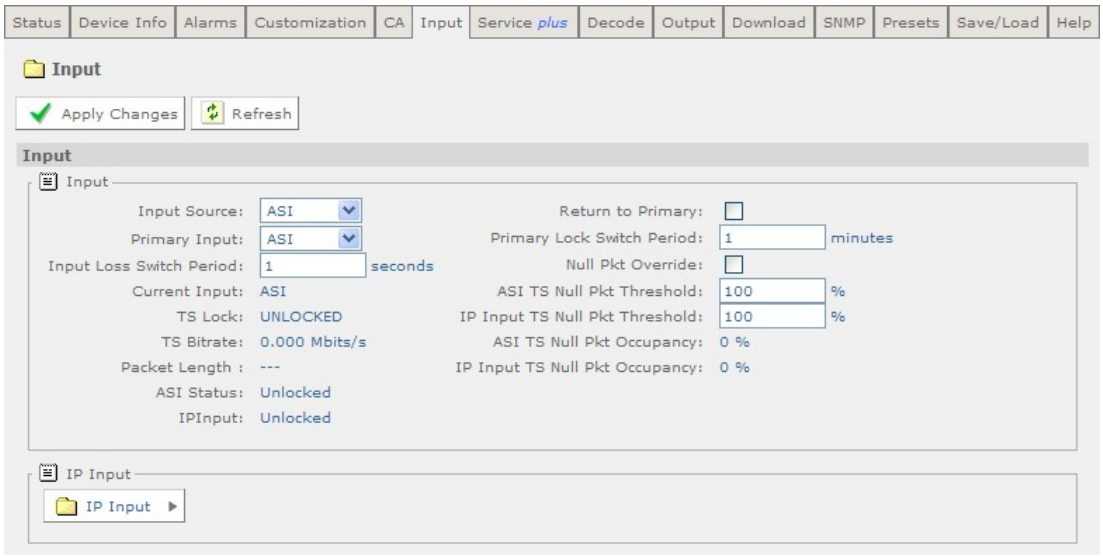
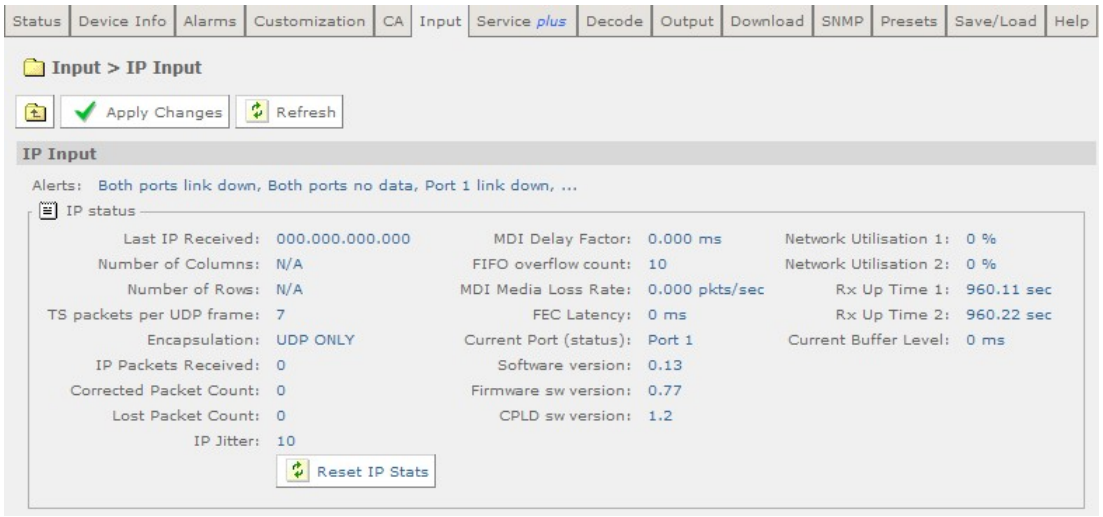


Figure 14 Input Web Page (IP Card fitted)

Click on the **IP Input** button on the Input page to display a further sub page.



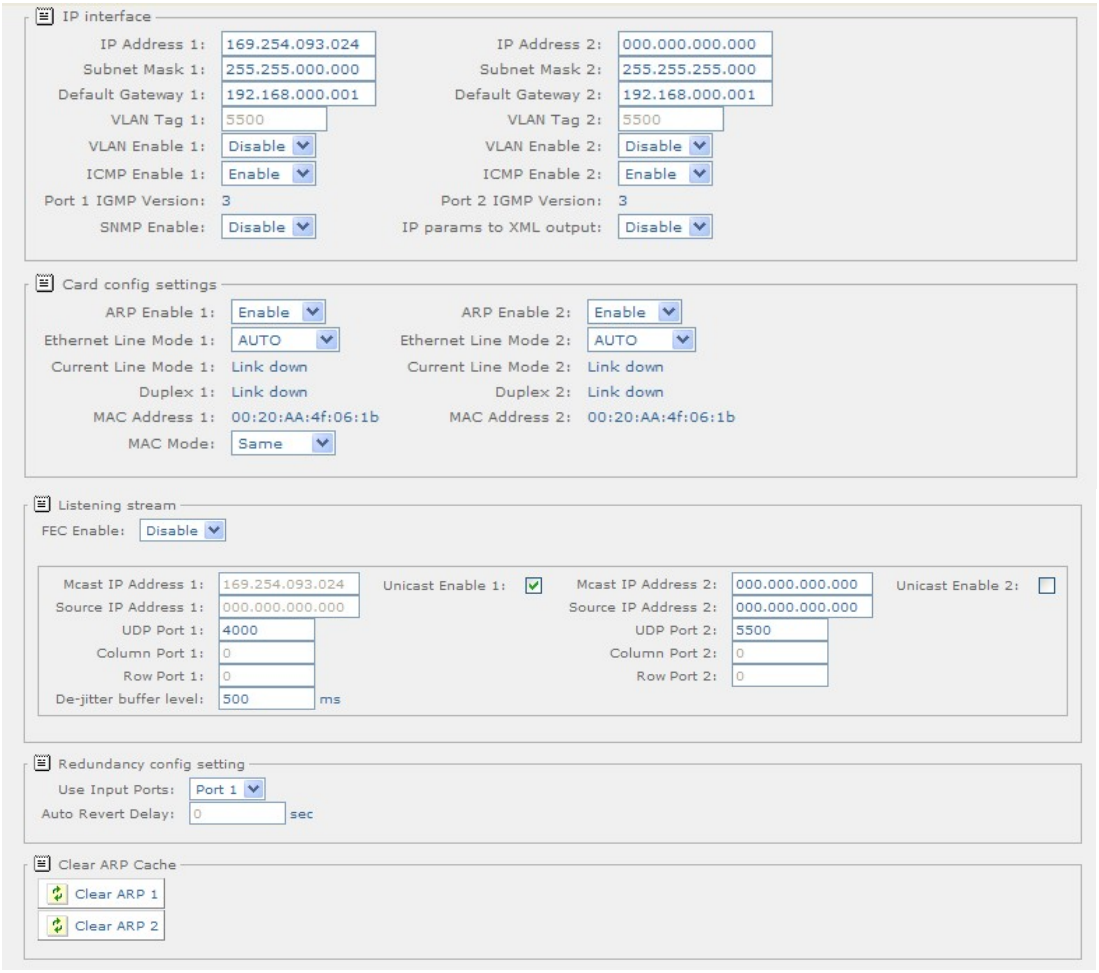


Figure 15 Input > IP Input Sub Page (IP Card fitted)

If the G.703 Input Card is fitted, the following web page is displayed.

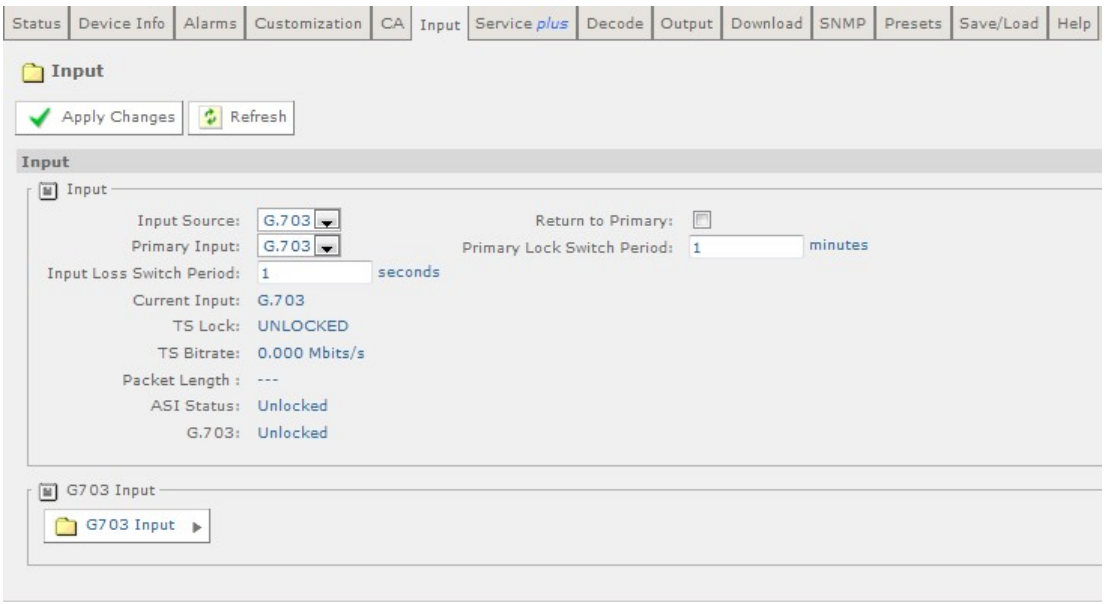


Figure 16 Input Web Page (G.703 Input Card fitted)

Click on the **G703 Input** button on the Input page to display a further sub page.

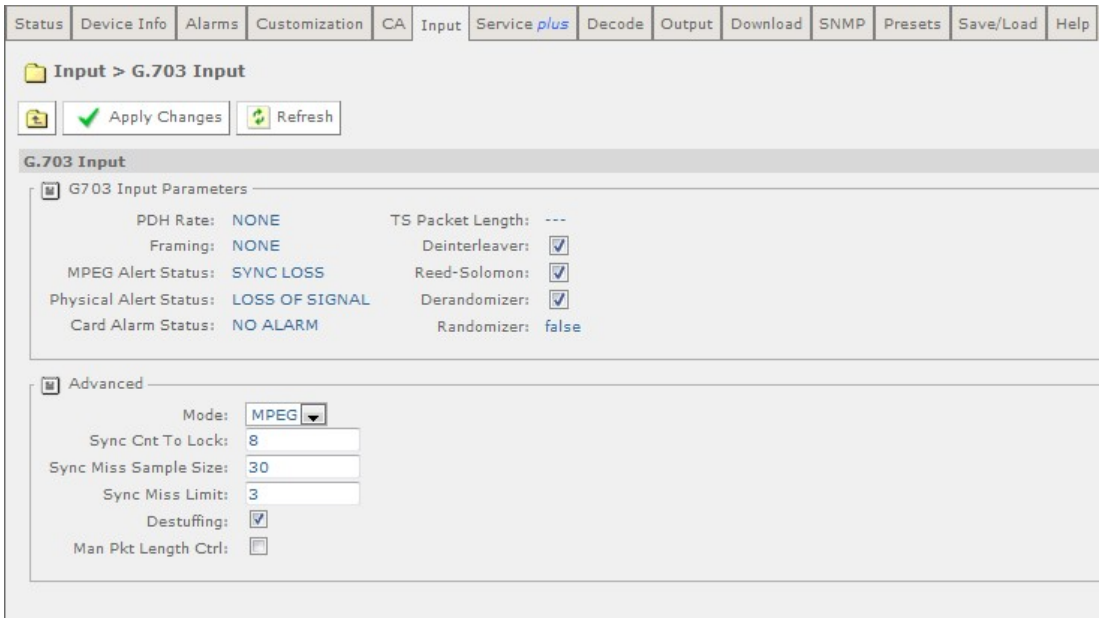


Figure 17 Input > G.703 Input Sub Page (G.703 Input Card fitted)

5.3.7 Service *Plus*

The Service *Plus* web page provides access to the various encryption and encoding services available to the receiver. A Service Control table is displayed showing which services are available. The only user-editable fields in this table are the Decrypt and Decode checkboxes. The user can select **Decrypt**, **Decode**, **Filter** or **Remap** for each service, depending on the node selected on the Output tab.

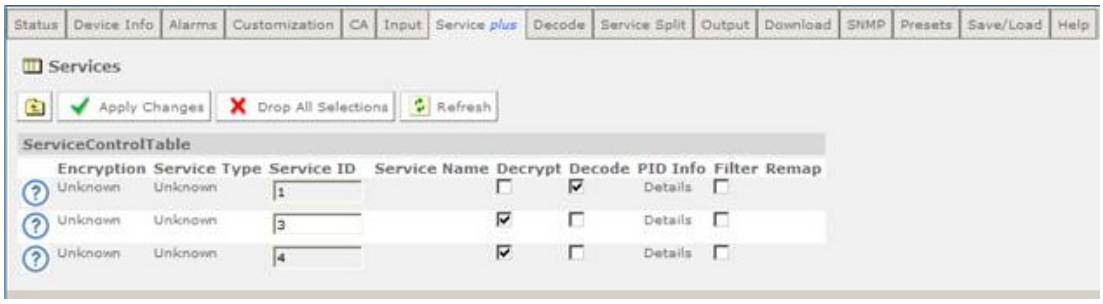


Figure 18 Service Plus Web Page

5.3.8 Decode

The Decode web page provides access to the video, audio and decoding functions of the receiver. There are a number of user-editable fields, via drop-down menus, available on this page and also provided are a number of buttons, which give access to the following further web pages:

- **Advance** - gives access to more advanced video and audio parameters.

- **VBI-VANC** - gives access to Vertical Blanking Interval-Vertical Ancillary Data Space (VBI-VANC) parameters.
- **Splice** - gives access to the splice operation parameters.
- **DVB Subtitles** - gives access to the Digital Video Broadcasting (DVB) subtitles parameters.
- **Teletext** - gives access to the Teletext parameters.

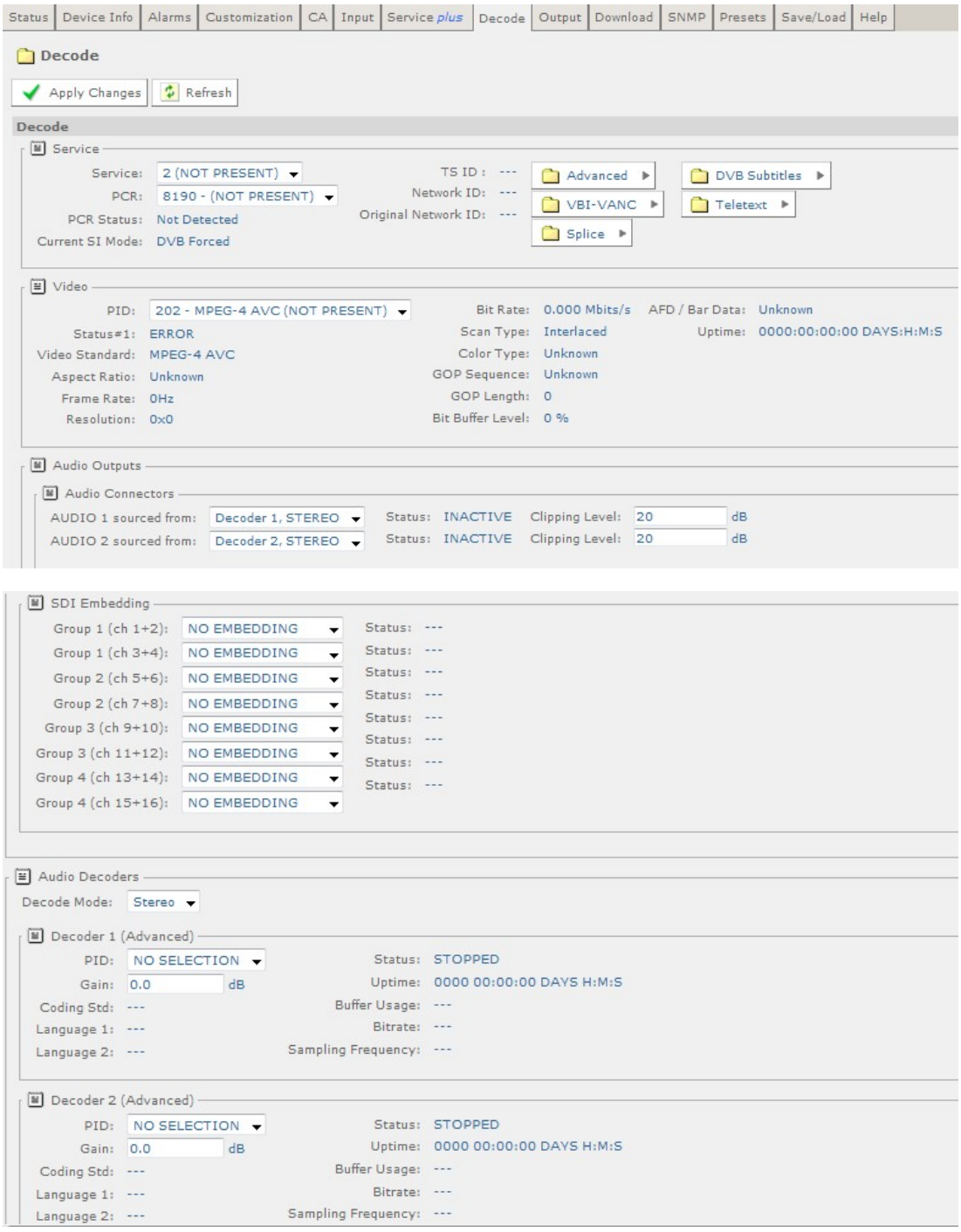


Figure 19 Decode Web Page

5.3.9 Output

The Output web page provides access to the output feed parameters of the receiver.

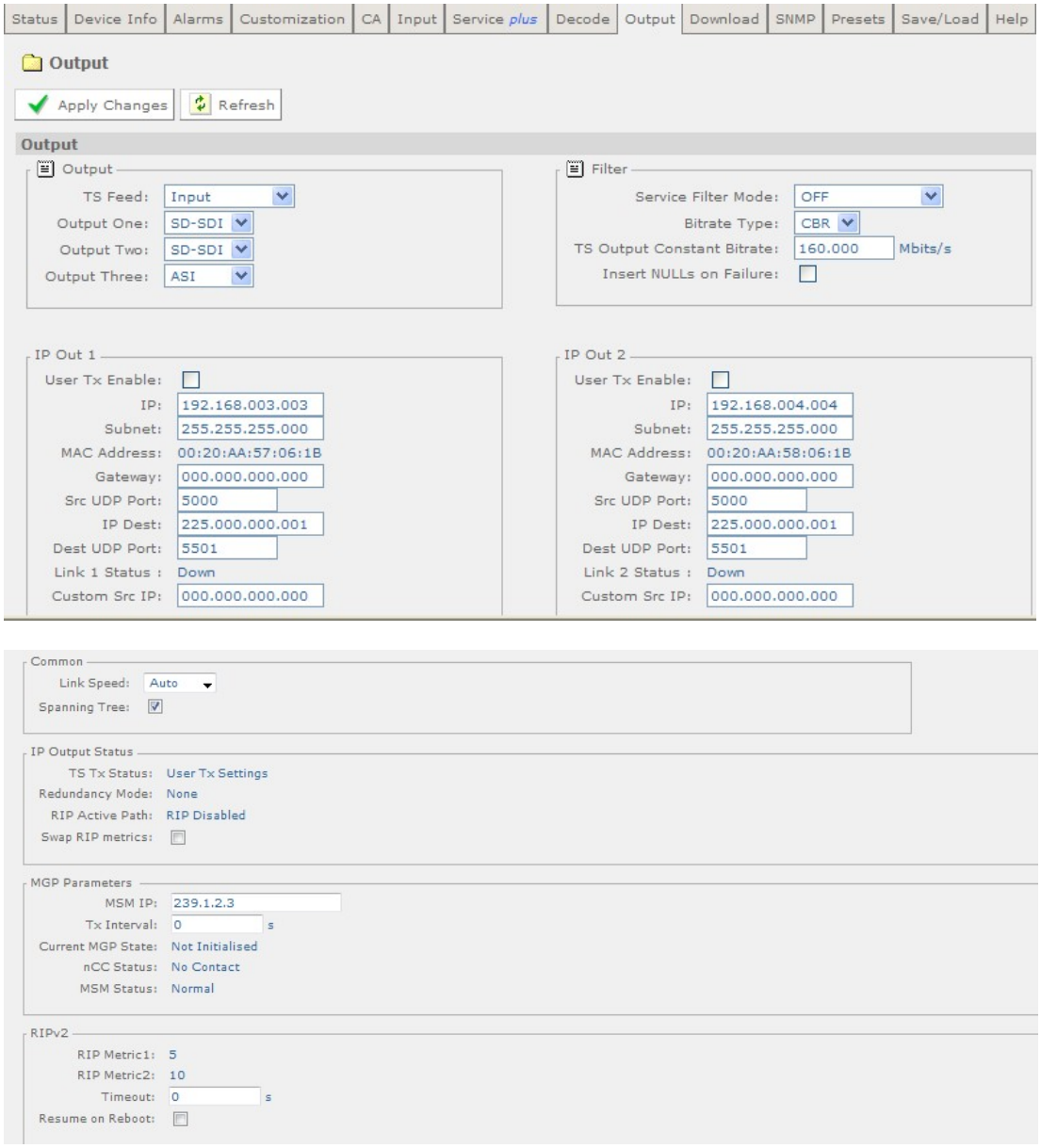


Figure 20 Output Web Page

5.3.10 Download

The Download web page provides access to the over air download status of the receiver. There are no user-editable fields on this page.

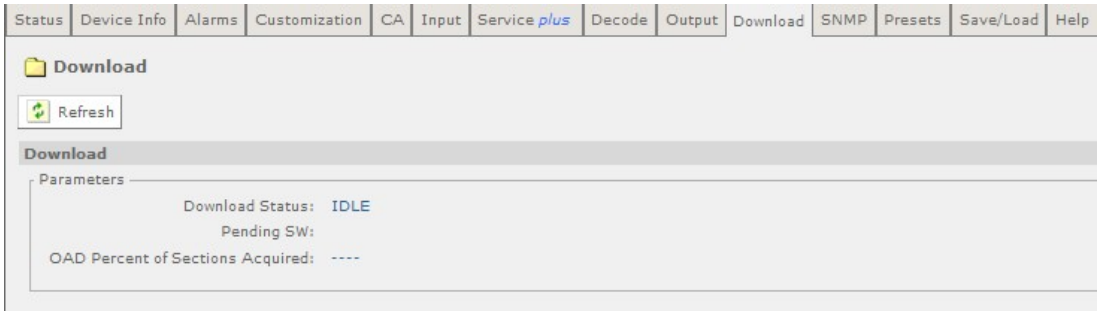


Figure 21 Download Web Page

5.3.11 SNMP

This page gives access to the Simple Network Management Protocol (SNMP) parameters for the receiver, including protocol selection and MIB parameters.

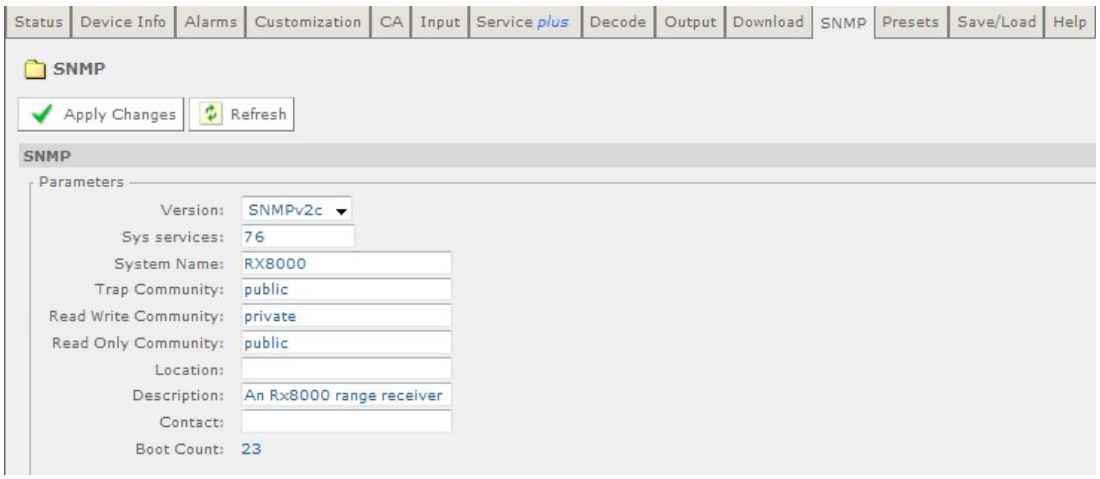


Figure 22 SNMP Web Page

5.3.12 Presets

The Presets web page gives access to a list of 40 preset configurations. This feature may be used to store input (tuning) parameters and service selection (service id only) in order that settings do not have to be re-entered when changes are made.

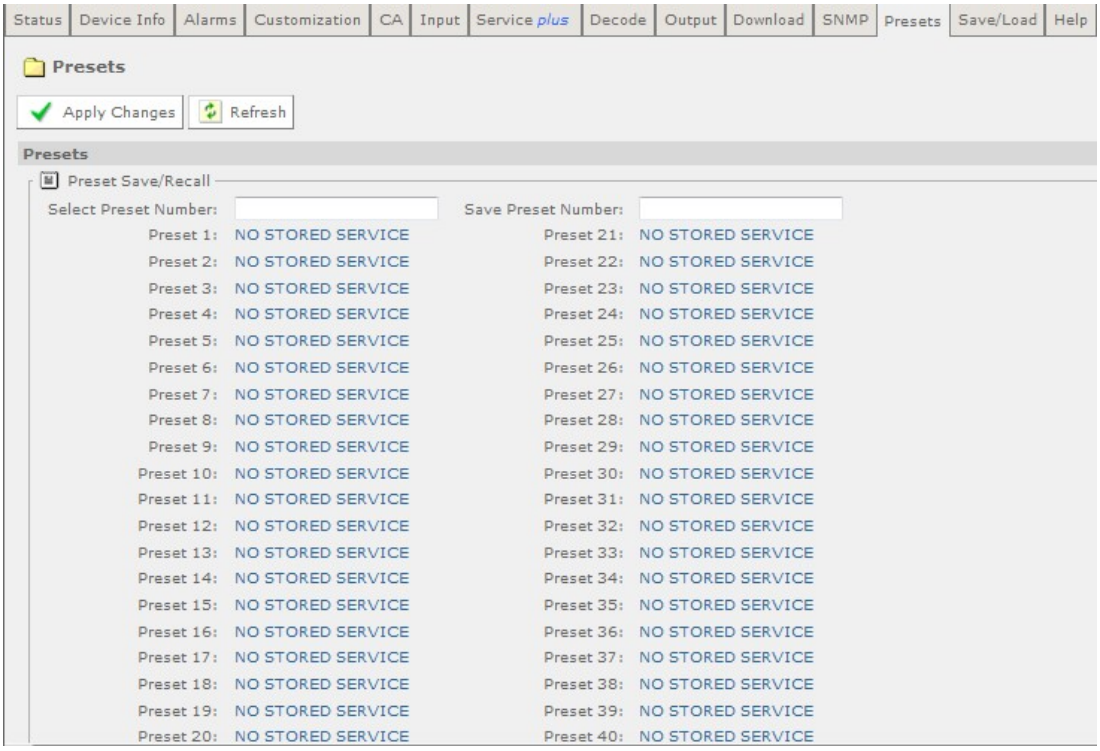
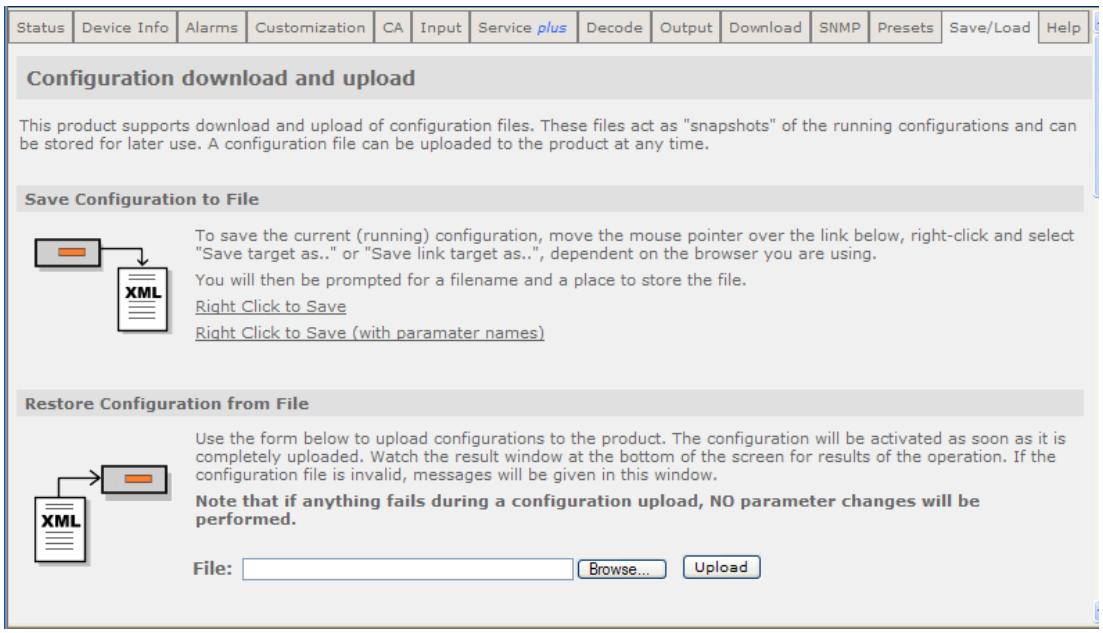


Figure 23 Presets Web Page

5.3.13 Save/Load

The Save/Load web page provides a range of configuration download and upload facilities, including saving and restoring unit configuration, saving unit MIB files, saving alarm log files and saving splice log files.



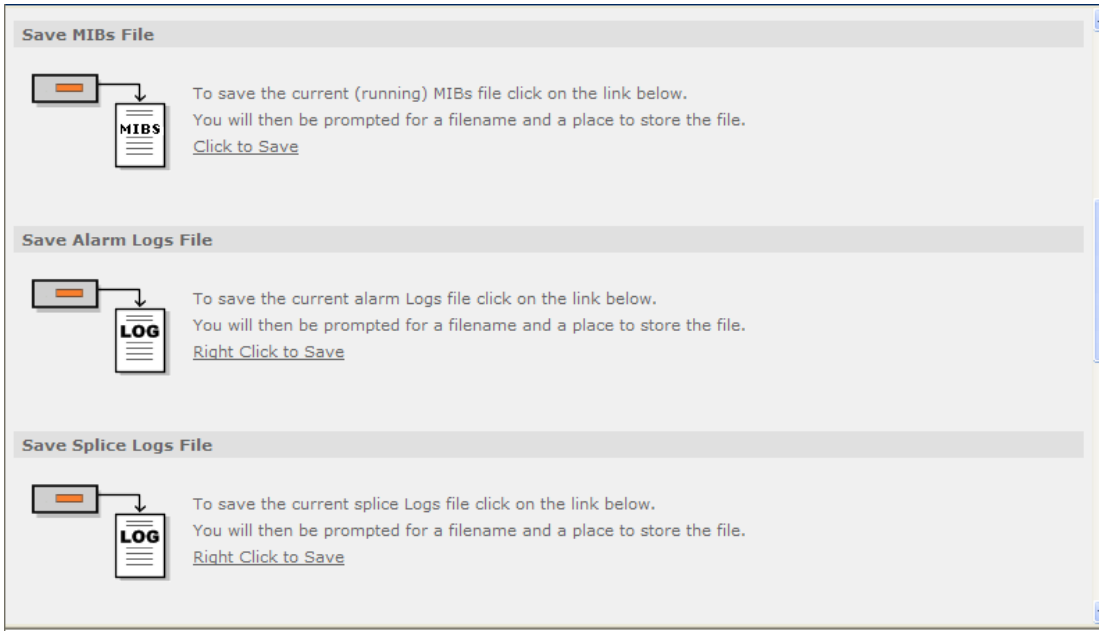


Figure 24 Save/Load Web Page

5.3.14 Help

The Help web page gives access to a Web Interface User Guide which provides a brief description of the interface functionality.

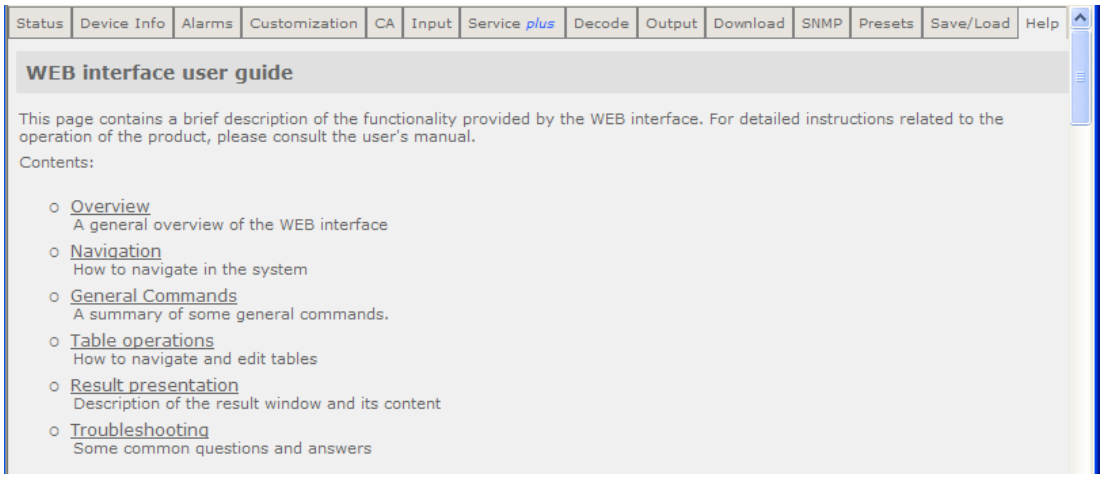


Figure 25 Help Web Page

6 Equipment Packaging

6.1 Packaging Statement

The outer carton and any cardboard inserts are made from 82% recycled material and are fully recyclable.

The Stratocell® or Ethafoam 220® polyethylene foam inserts can be easily recycled with other low density polyethylene (LDPE) materials

6.2 Packaging Markings

The symbols printed on the outer carton are described below:

Handle with care.

This way up.

Fragile.

Protect from moisture.

CD

See *Reference Guide* for compliance with directives details.

CD

See *Reference Guide* for compliance details.

Defines country of origin.

The packaging is reusable per GB 18455-2001.

This symbol guarantees that packaging with this symbol is recyclable and will be accepted by cardboard recyclers.

Recyclable per GB 18455-2001.

7 Materials Declarations

7.1 Overview

Ericsson products are designed and manufactured in keeping with good environmental practice. Our component and materials selection policy prohibits the use of a range of potentially hazardous materials. In addition, we comply with relevant environmental legislation.

7.2 For the European Union

For product sold into the EU after 1st July 2006, we comply with the EU RoHS Directive. We also comply with the WEEE Directive.

7.3 For China

For product sold into China after 1st March 2007, we comply with the “Administrative Measure on the Control of Pollution by Electronic Information Products”. In the first stage of this legislation, content of six hazardous materials has to be declared together with a statement of the “Environmentally Friendly Use Period (EFUP)”: the time the product can be used in normal service life without leaking the hazardous materials. Ericsson expects the normal use environment to be in an equipment room at controlled temperatures (around 22°C) with moderate humidity (around 60%) and clean air, near sea level, not subject to vibration or shock.

Where Ericsson product contains potentially hazardous materials, this is indicated on the product by the appropriate symbol containing the EFUP. For Ericsson products, the hazardous material content is limited to lead (Pb) in some solders. This is extremely stable in normal use and the EFUP is taken as 50 years, by comparison with the EFUP given for Digital Exchange/Switching Platform in equipment in Appendix A of “General Rule of Environment-Friendly Use Period of Electronic Information Products”. This is indicated by the product marking:

It is assumed that while the product is in normal use, any batteries associated with real-time clocks or battery-backed RAM will be replaced at the regular intervals.

The EFUP relates only to the environmental impact of the product in normal use, it does not imply that the product will continue to be supported for 50 years.

8 Disposal of this Equipment

8.1 General

Dispose of this equipment safely at the end of its life. Local codes and/or environmental restrictions may affect its disposal. Regulations, policies and/or environmental restrictions differ throughout the world. Contact your local jurisdiction or local authority for specific advice on disposal.

8.2 For the European Union

"This product is subject to the EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE) and should not be disposed of as unsorted municipal waste."

9 Recycling

Ericsson SA TV Recycling has a process facility that enables customers to return Old and End-of-Life Products for recycling if it is required.

Ericsson provides assistance to customers and recyclers through our Ericsson and SATV Recycling eBusiness Portal.

This can be reached at: https://ebusiness.ericsson.net/.

To gain access to the Recycling site, you must be set up with a unique login and password.

To request the login, please contact tvtechpubs@ericsson.com, and include the information below:

- First/Last name
- Password request (6 numbers/characters). If you do not include this information one will be created for you.
- Phone
- Location (Country)
- Company
- Work Area (select one of the below)
  - Executive Management
  - Marketing and Sales
  - Planning/Engineering
  - Procurement/Supply
  - Project & Programme
  - Implementation
  - Operations and Maintenance
  - R&D
  - Other